

FIG. 1A

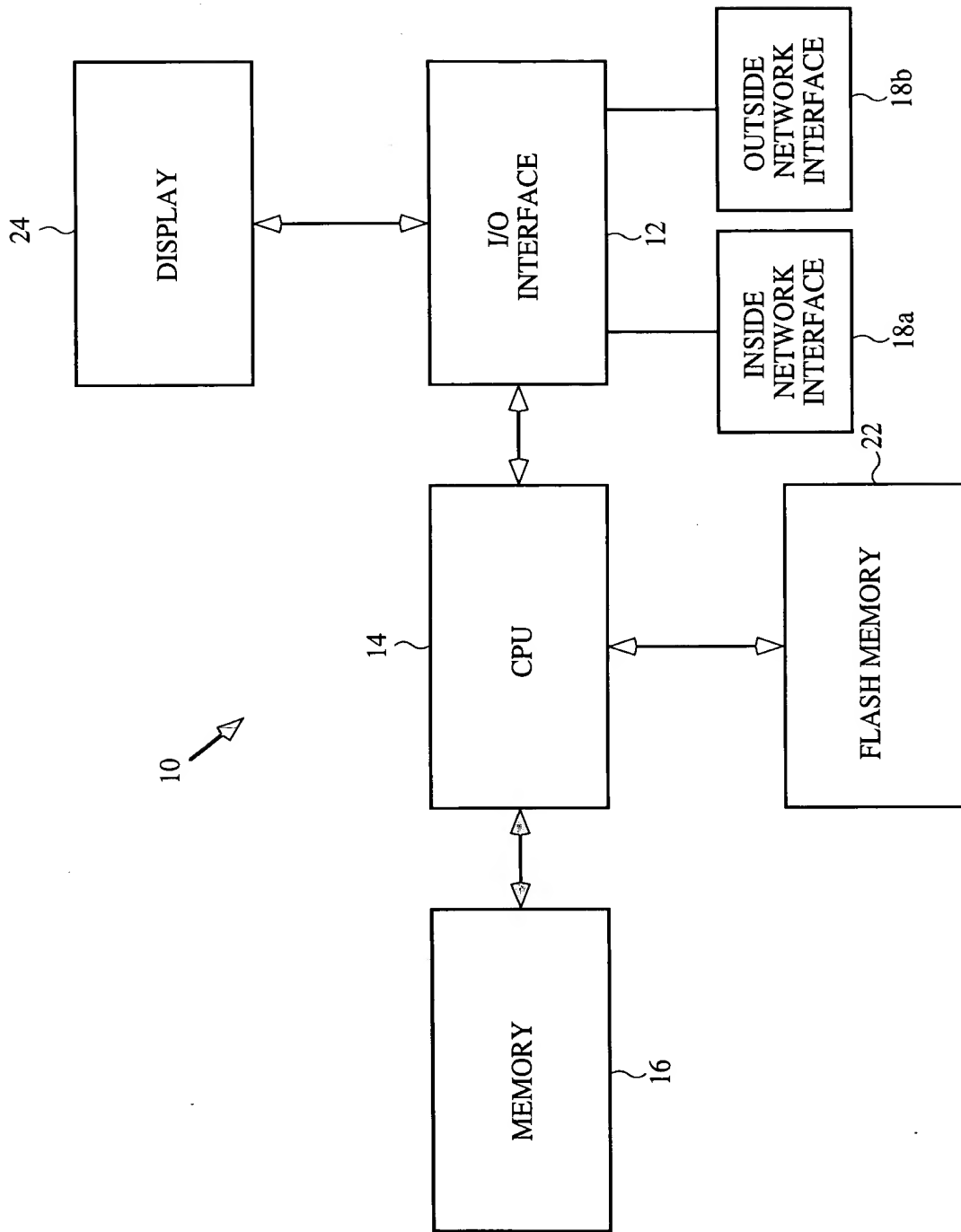


FIG. 1B

FIG. 1C is a block diagram of a network system 100. The system 100 includes an Internet 102, a Router 104, a Local Director 110, and a group of Servers 112. The Internet 102 is connected to the Router 104, which is connected to the Local Director 110. The Local Director 110 is connected to a bus 114, which is connected to the Servers 112.

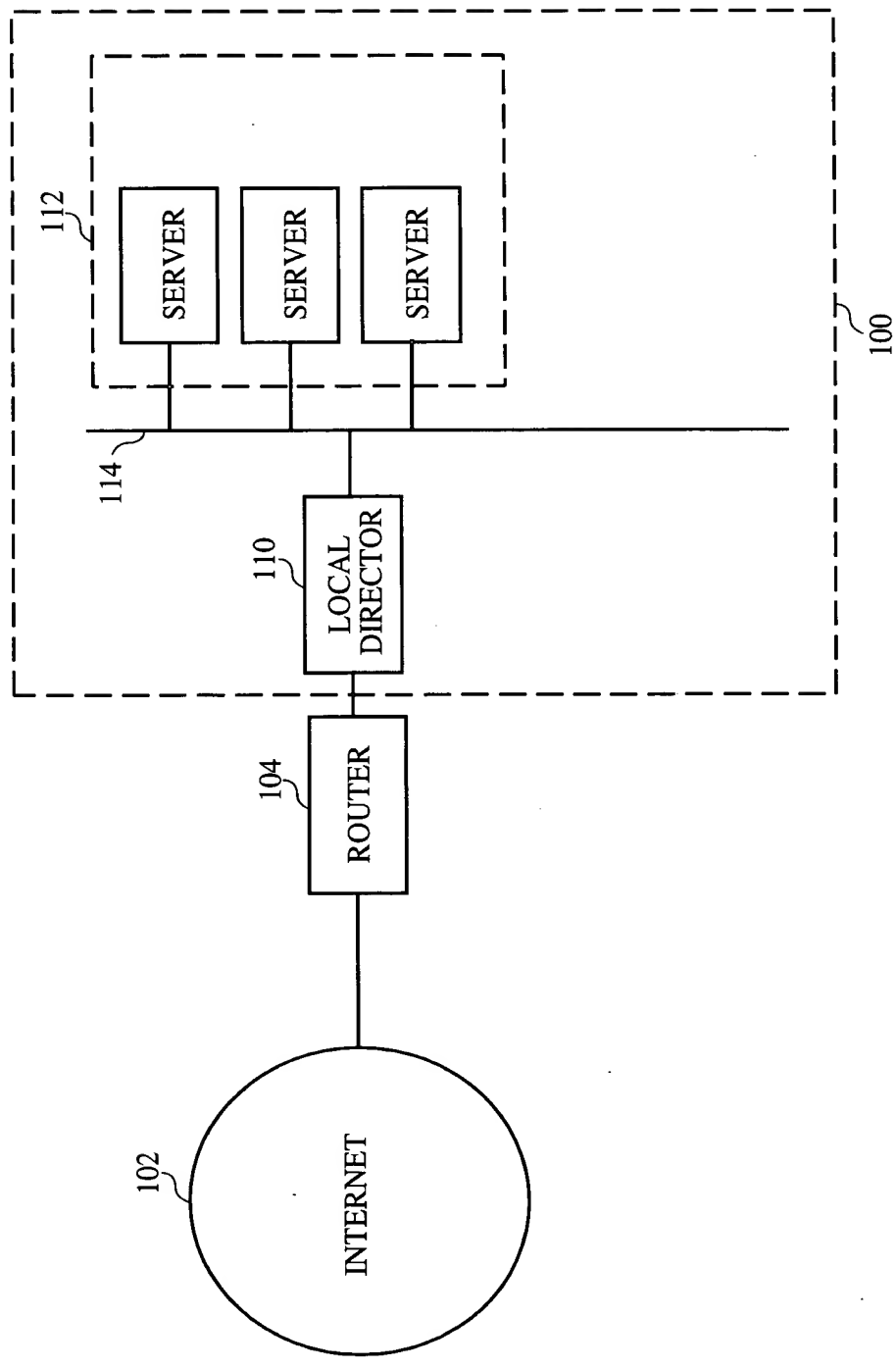


FIG. 1C

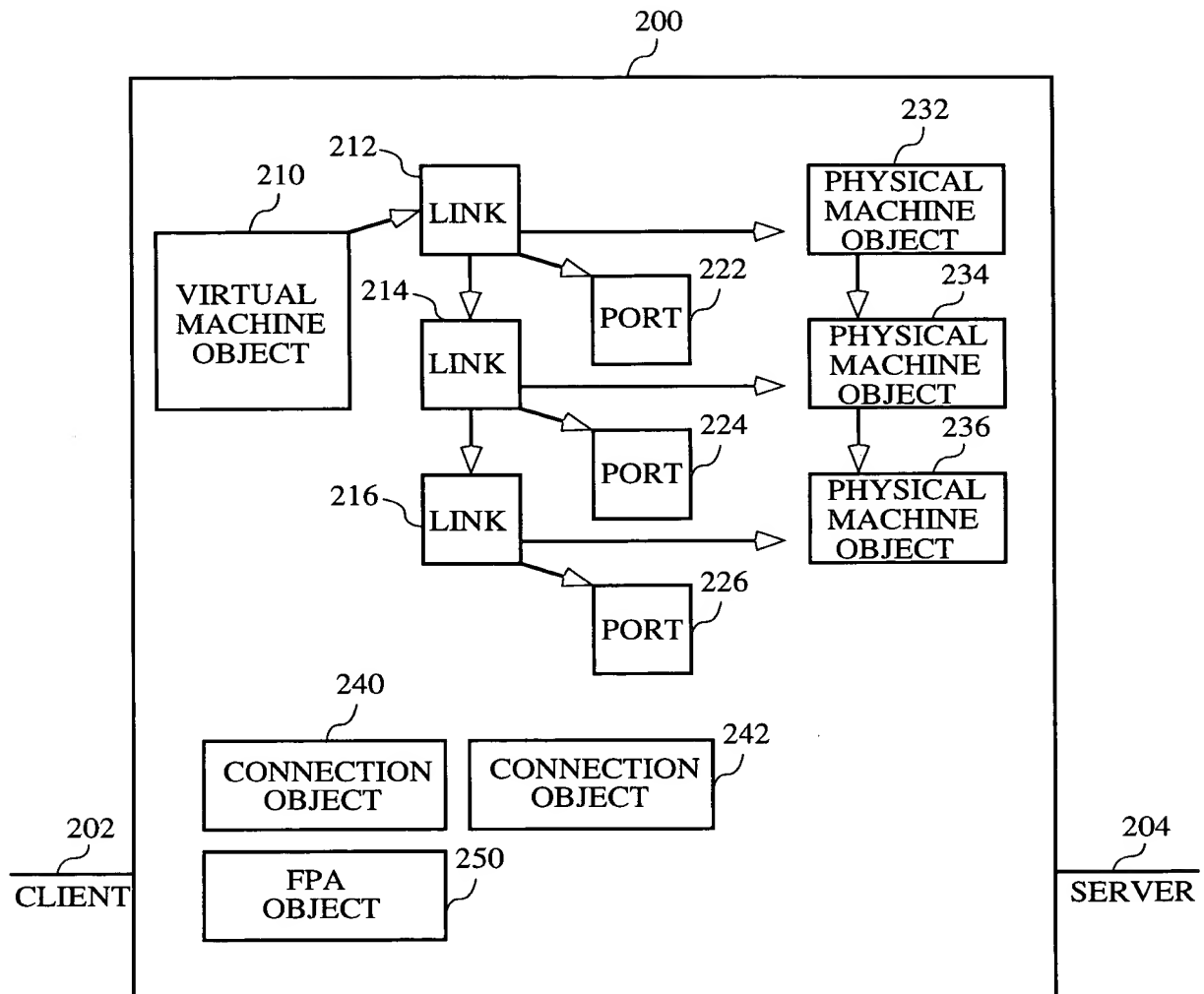


FIG. 2

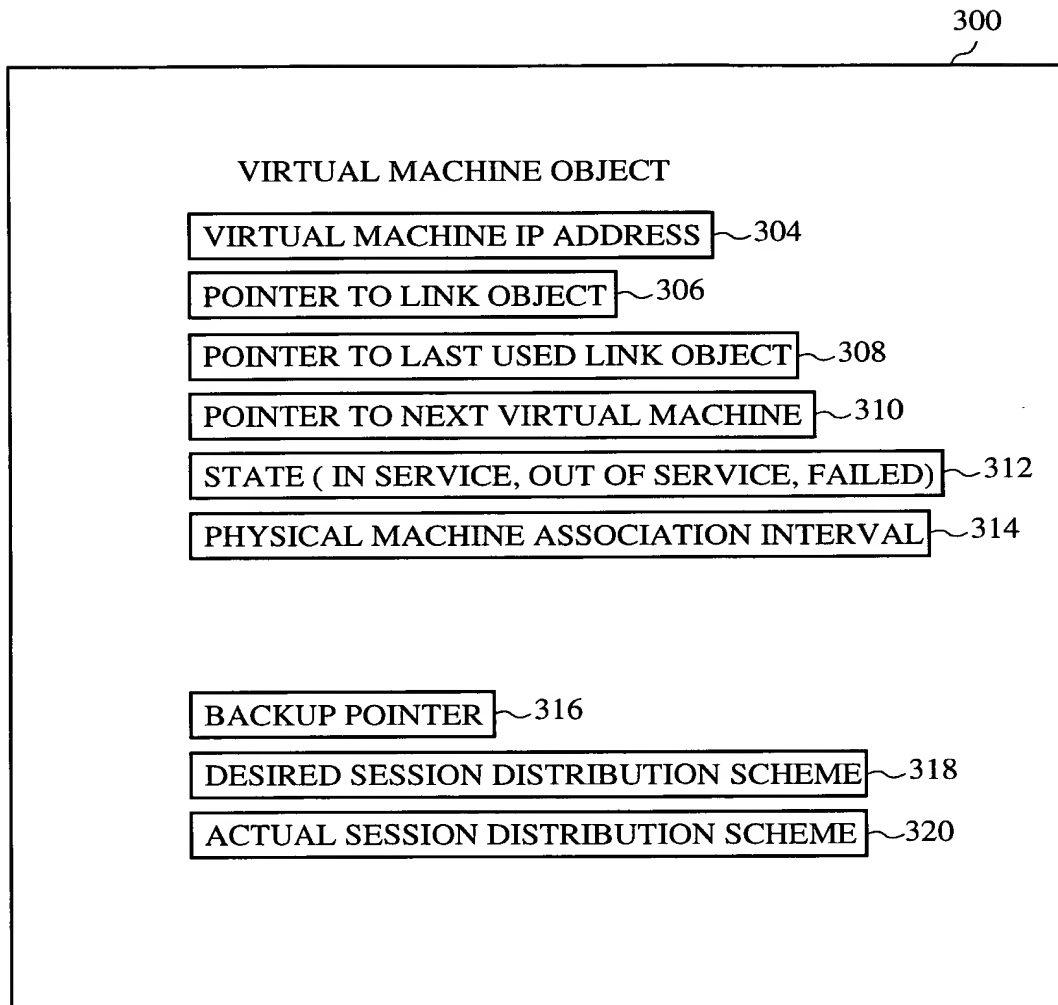


FIG. 3A

PHYSICAL MACHINE OBJECT

- 350~ POINTER TO NEXT PHYSICAL MACHINE OBJECT
- 352~ REAL IP ADDRESS OF THE PHYSICAL MACHINE
- 354~ LAST RESPONSE TIME OF THE PHYSICAL
- 356~ THE NUMBER OF VIRTUAL MACHINES
LINKED TO THE PHYSICAL MACHINE
- 358~ RESPONSE TIME BIASED BY AGE (PREDICTED RESPONSE TIME)
- 360~ AGE STAMP
- 362~ MAC ADDRESS OF THE PHYSICAL MACHINE
- 364~ NUMBER OF UNANSWERED SYN CONNECTIONS
- 366~ STATE OF THE PHYSICAL MACHINE (IN SERVICE, OUT OF
SERVICE, OR FAIL)
- 368~ NUMBER OF DITCHED CONNECTIONS
- 370~ CONNECTION FAILURE THRESHOLD
- 371~ NUMBER OF CONNECTIONS TO PHYSICAL MACHINE
- 372~ LOCAL PORT NUMBER
- 373~ MAXIMUM NUMBER OF ALLOWED CONNECTIONS
- 374~ CONNECTION TIMEOUT
- 375~ POINTER TO BACKUP MACHINE

- 376~ WEIGHT
- 377~ PORT VARIABLE

FIG. 3B

321

CONNECTION OBJECT

326 ~ POINTER TO NEXT CONNECTION OBJECT ON HASH CHAIN

327 ~ FOREIGN IP ADDRESS

328 ~ FOREIGN PORT NUMBER

329 ~ VIRTUAL MACHINE IP ADDRESS

330 ~ VIRTUAL MACHINE PORT NUMBER

331 ~ PHYSICAL MACHINE POINTER

332 ~ PHYSICAL MACHINE MAPPED PORT NUMBER

333 ~ MULTIPURPOSE TIMER

334 ~ PHYSICAL MACHINE PORT NUMBER

FIG. 3C

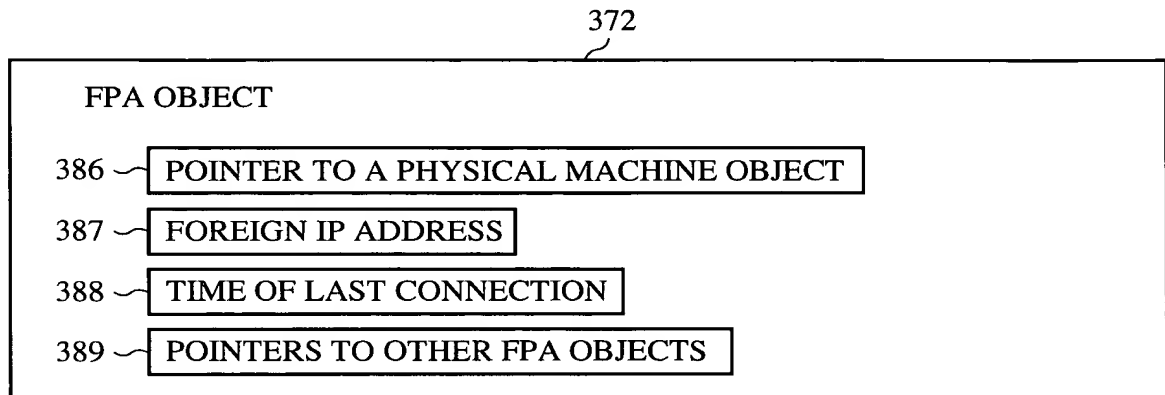


FIG. 3D

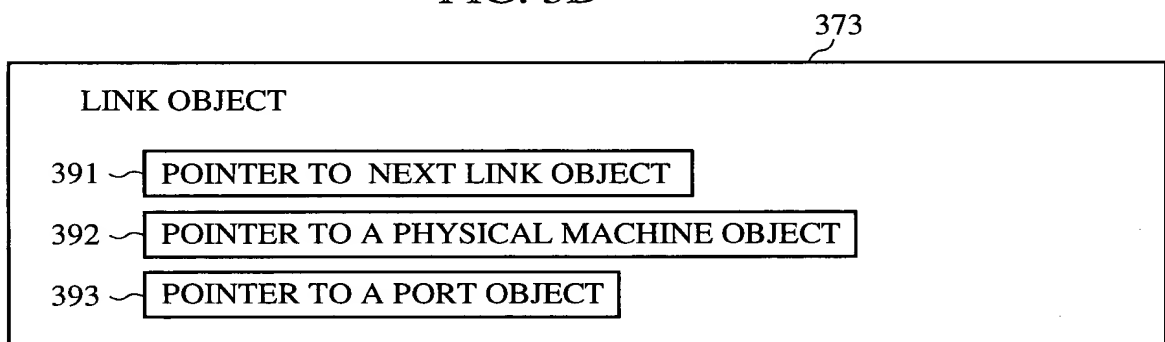


FIG. 3E

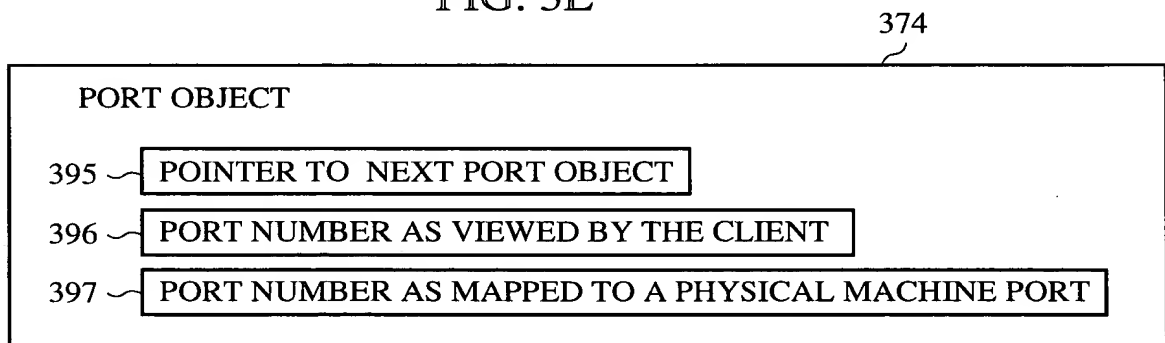


FIG. 3F

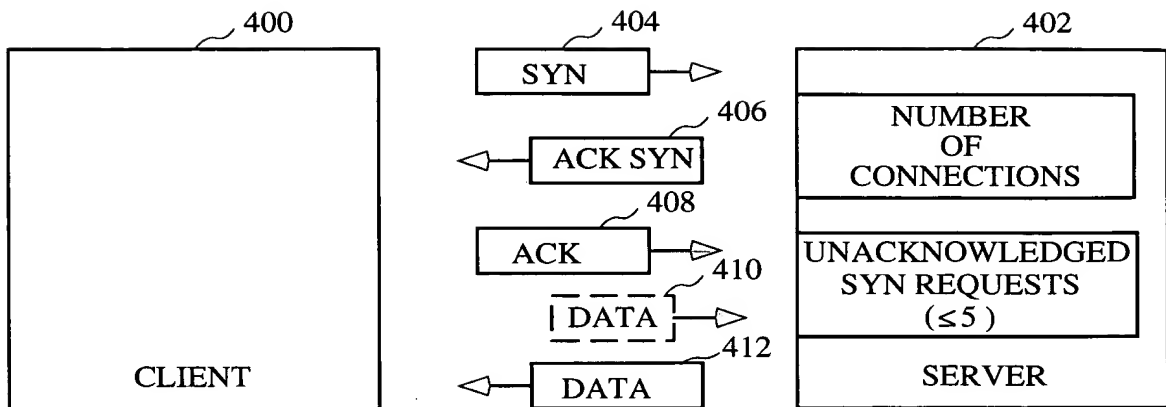
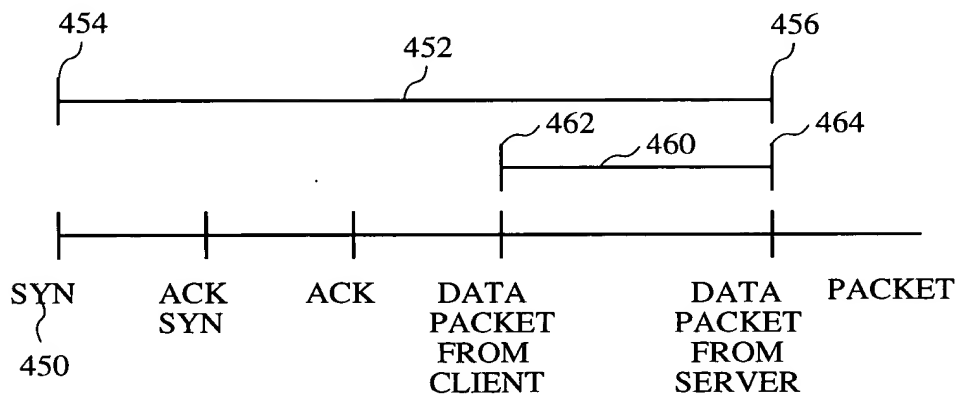


FIG. 4A



$$470 \sim R = \frac{I}{NC}$$

$$472 \sim PR = NC \cdot R - f(t)$$

$$474 \sim f(t) = \frac{t_{CURRENT} - t_{AGE STAMP}}{4}$$

FIG. 4B

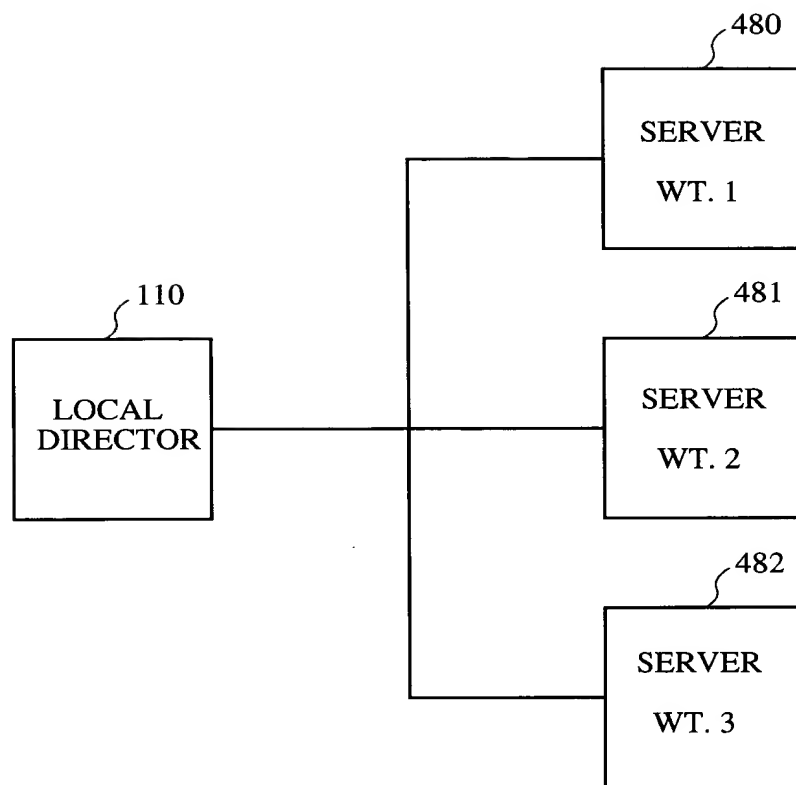


FIG. 4C

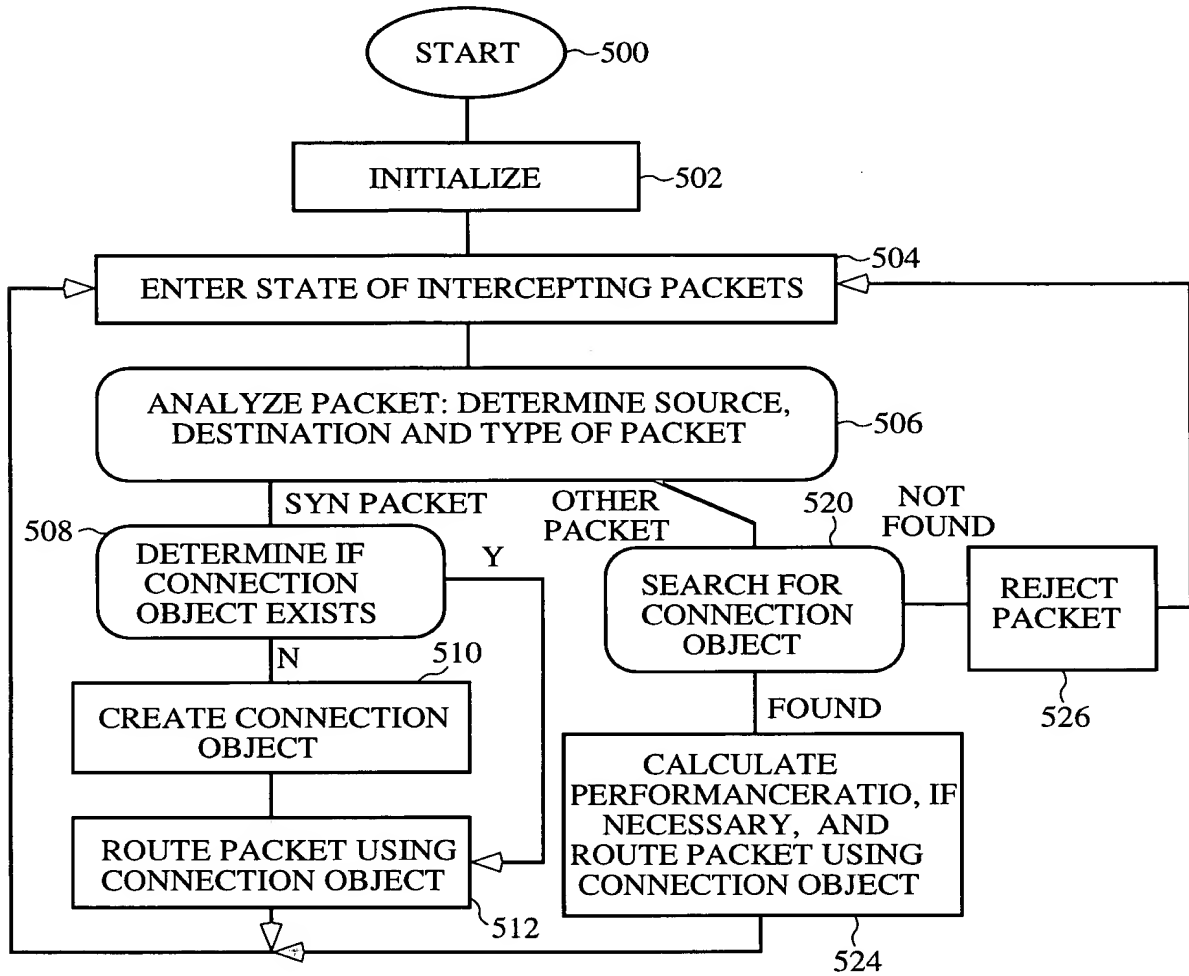


FIG. 5

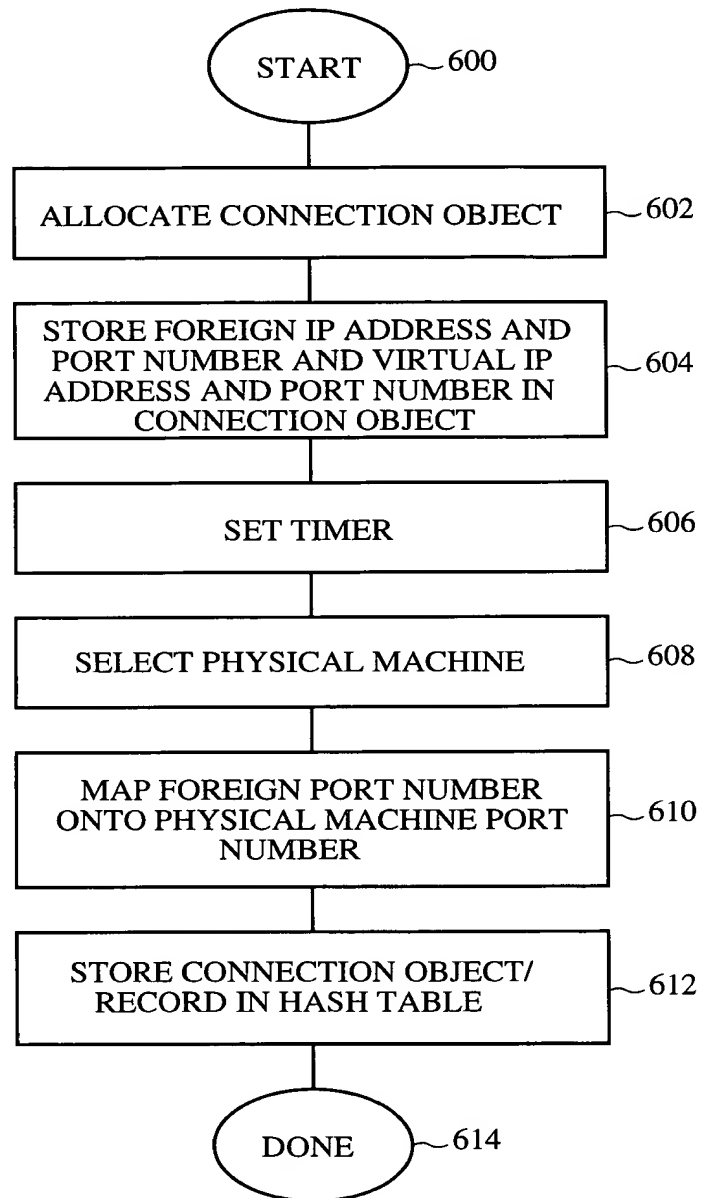


FIG. 6

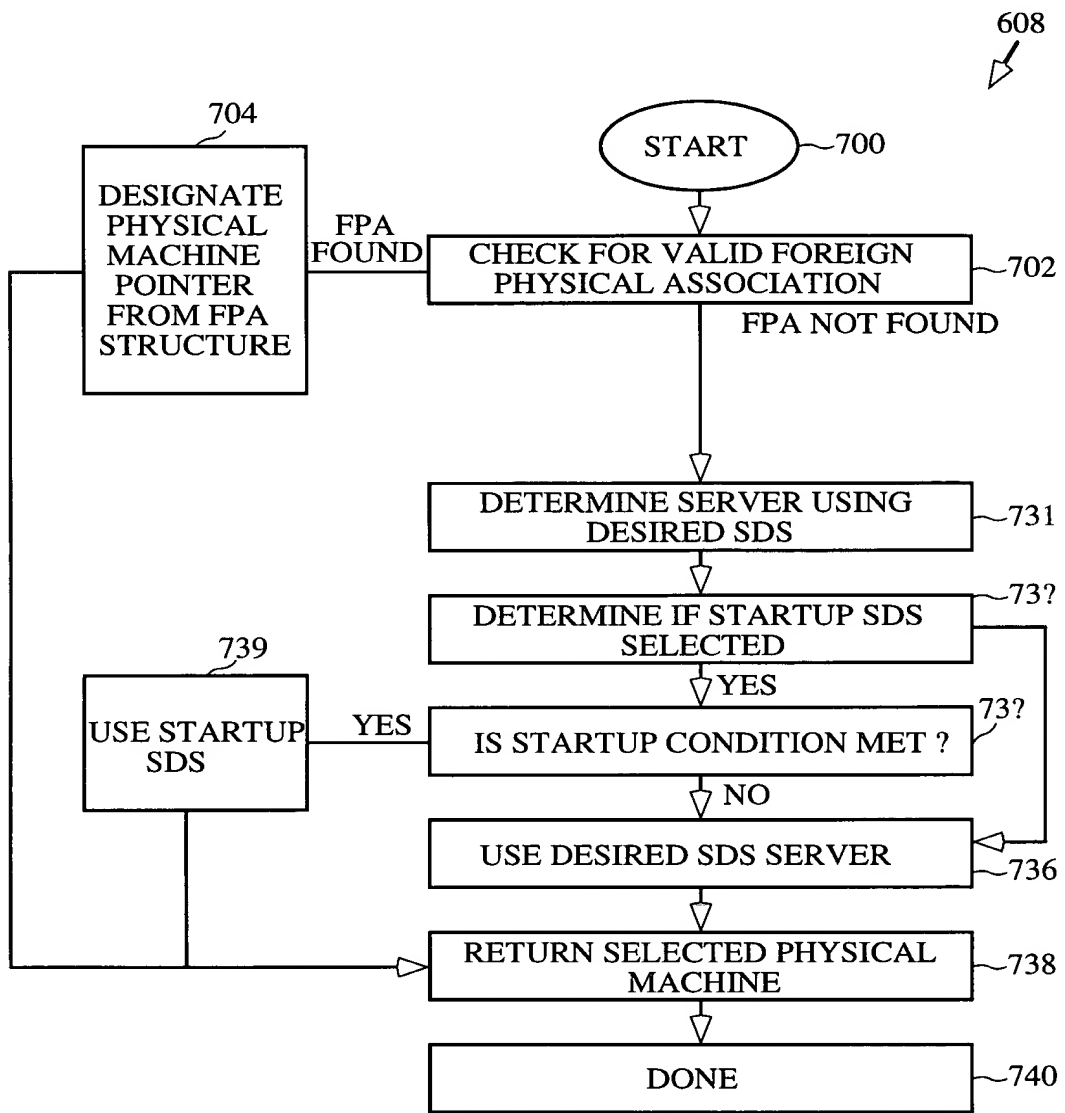


FIG. 7A

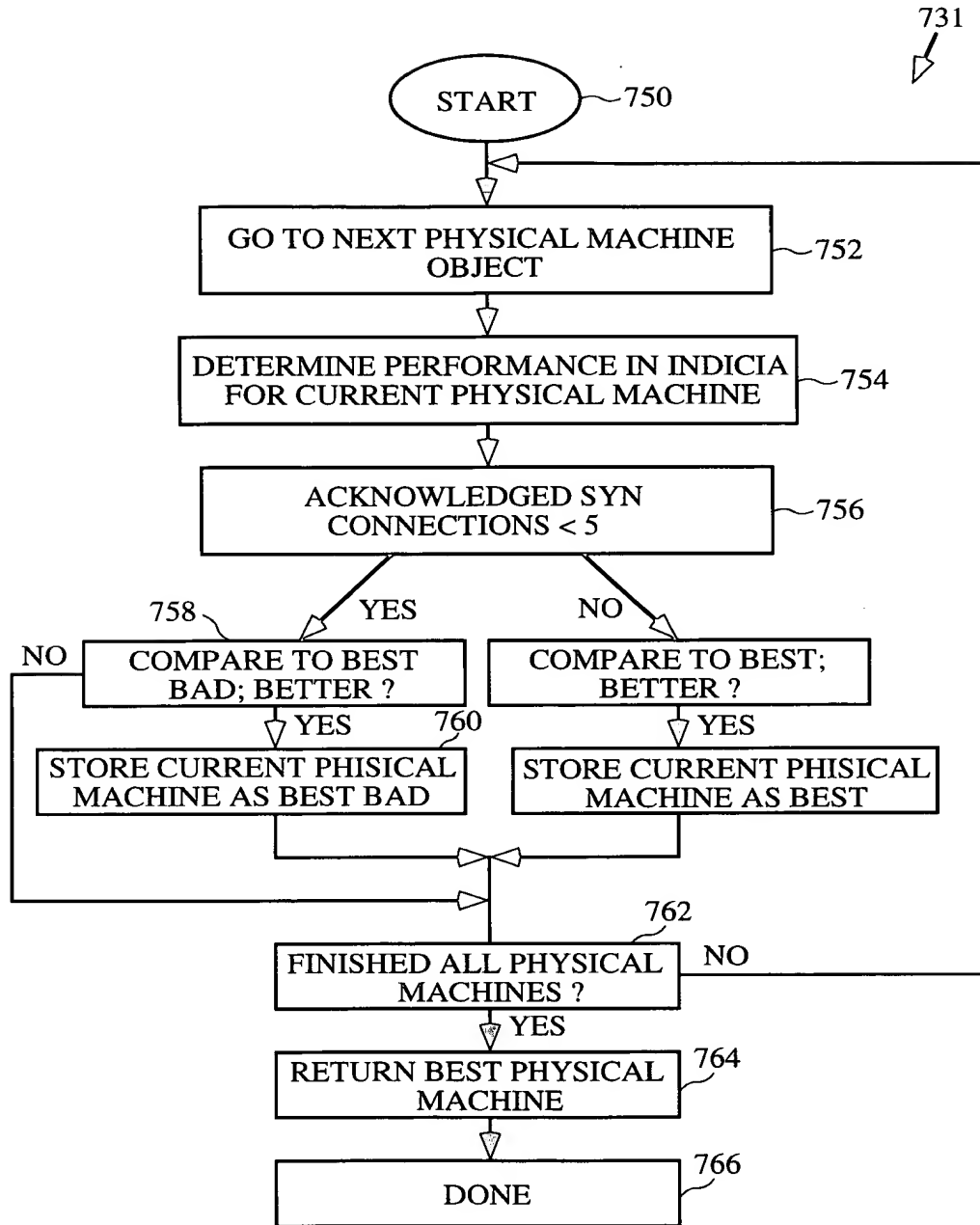


FIG. 7B

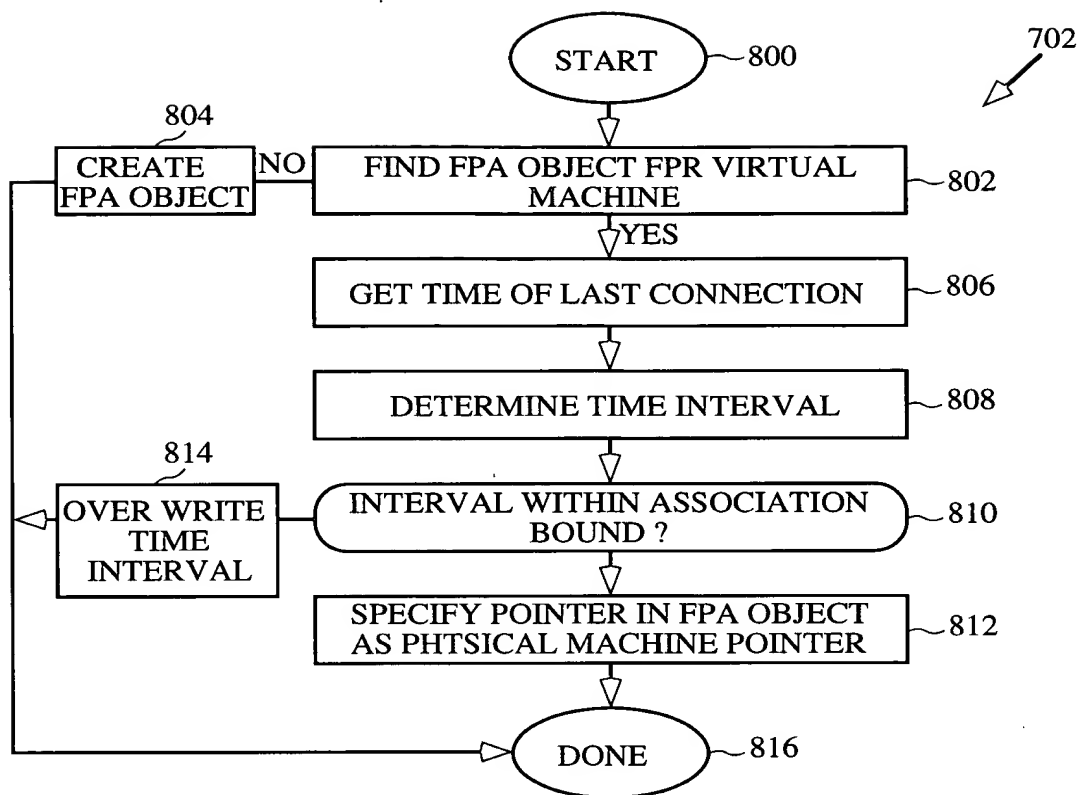


FIG. 8

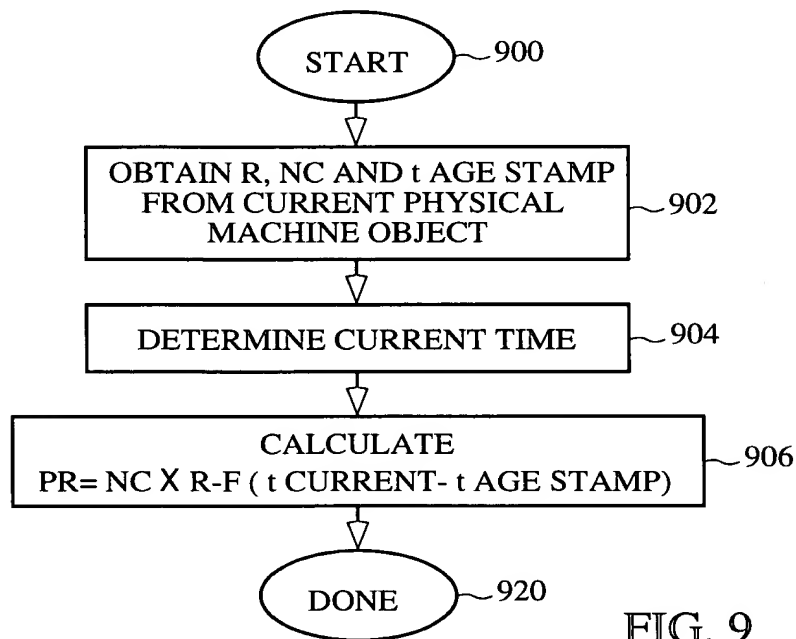


FIG. 9

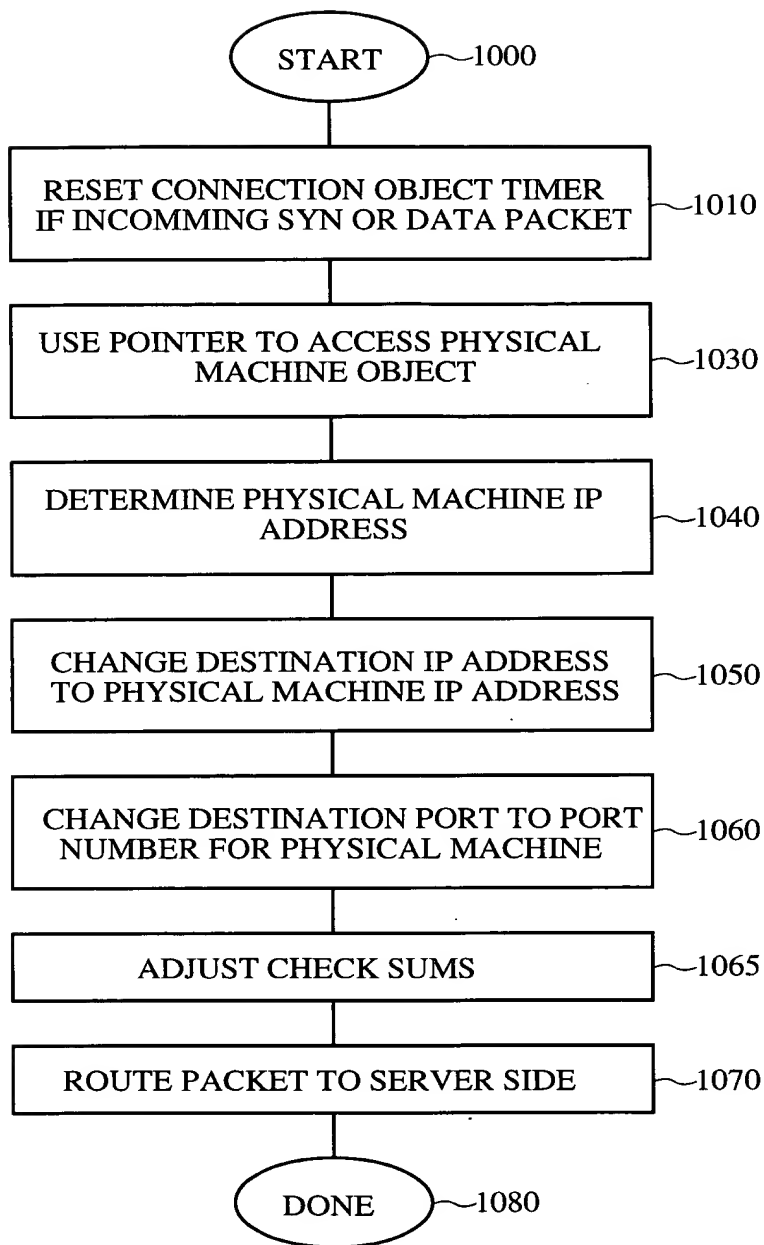


FIG. 10

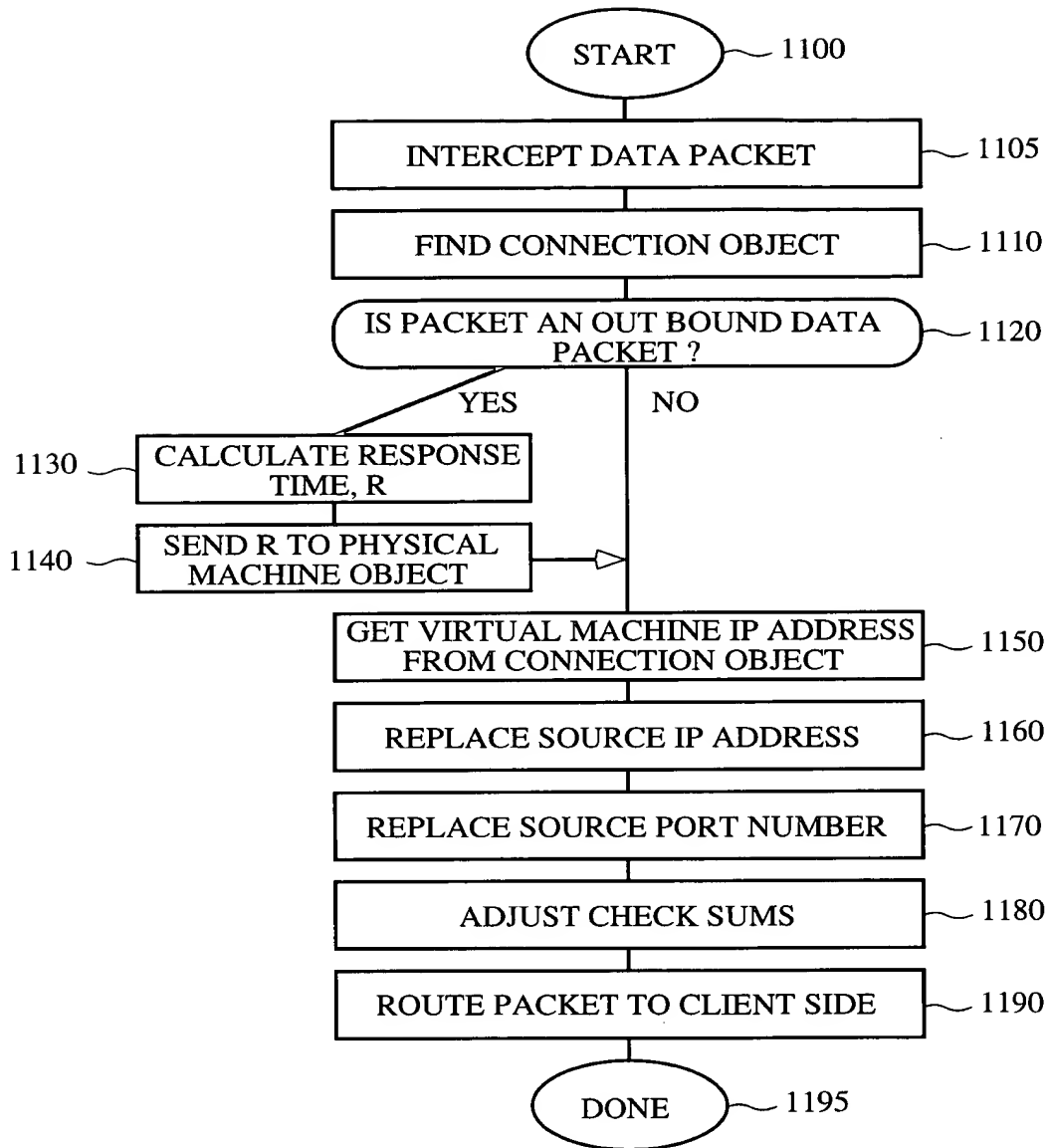


FIG. 11